

## **Appendix A**

Centers for Disease Control and Prevention, “Public Health Guidance for Community-Level Preparedness and Response to Severe Acute Respiratory Syndrome (SARS),” available at <http://www.cdc.gov/ncideod/sars/sarsprepplan.htm>, is divided into the following sections:

- Executive Summary
- Core Document
- Supplement A: Command and Control
- Supplement B: Surveillance
- Supplement C: Preparedness and Response in Healthcare Facilities
- Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine
- Supplement E: Managing International Travel-Related Transmission Risk
- Supplement F: Laboratory Diagnosis
- Supplement G: Communication

## **Appendix B**

### **Glossary of Acronyms/Definitions**

APHL - Association of Public Health Laboratories

ARC - American Red Cross

ARDS – Acute Respiratory Distress Syndrome

ASTHO - Association of State and Territorial Health Officials

CDC - Centers for Disease Control and Prevention

CDRS - Communicable Disease Reporting System

CDS - Communicable Disease Service (NJDHSS)

CHAIN - Community Health Alert and Information Network: consists of public health and community representatives statewide, including LHDs, health care organizations, law enforcement organizations, local government officials and other public health partners

Cohorting - the process of grouping ill individuals together to prevent further transmission of illness

CSTE - Council of State and Territorial Epidemiologists

ECC - Emergency Communications Center (NJDHSS CDS)

EMS - Emergency Medical Services

EOC - Emergency Operations Center

Epidemiology - the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems.

HAN - Health Alert Network

HCF - Health Care Facility

HCW - Health Care Worker: includes licensed and non-licensed workers in hospitals, long term care facilities, pharmacies, prisons

HEPR - Division of Health Emergency Preparedness and Response (NJDHSS)

HIPAA - Health Insurance Portability and Accountability Act

ILI - Influenza-Like Illness

I/Q - Isolation and Quarantine

Isolation is the act of separating ill persons from healthy persons and restricting their movements to stop the spread of illness.

Quarantine applies to people who have been exposed and may be infected but are not yet ill. Separating exposed people and restricting their movements is intended to stop the spread of that illness.

LAPG - LINCS Agency Planning Group

LCCMT - Local Case/Contact Management Teams

LHD - Local Health Departments

LINCS - Local Information Network and Communications System

LOMT - Local Operations Monitoring Team

LTCF - Long Term Care Facilities

MAA - Mutual Aid Agreement

NACCHO - National Association of County and City Health Officials

NJDHS – New Jersey Department of Human Services

NJDHSS - New Jersey Department of Health and Senior Services

NJHA - New Jersey Hospital Association

Nosocomial – denoting a new disorder (not the patient’s original condition) associated with being treated in a healthcare facility, such as a hospital-acquired infection.

OEM - Office of Emergency Management

PHCW - Public Health Care Worker:

- a. Clinicians - including private practice physicians and nurses (especially school nurses and visiting nurses)
- b. Health Care Workers - including non-licensed workers in hospitals, long term care facilities, pharmacies, prisons
- c. Laboratory Workers - in both public health and commercial labs

- d. Public Health Workers - in LHDs, LINCS agencies, and NJDHSS
- e. Emergency Response Workers (law enforcement, emergency medical technicians, paramedics, and fire personnel)
- f. Mental Health Workers - through the agencies where they work or volunteer
- g. Students - medical, nursing, and paramedic

PHC System/Partners - Public Health Care System/Partners: encompasses the continuum of all activities related to the promotion of health and the prevention of disease and untimely death. This includes activities that are traditionally performed by the public health and health care sectors. The partners are those organizations that provide these services, such as hospitals, public health agencies, schools, colleges, long term care facilities, ambulatory care facilities, EMS, private medical practices and pharmacies.

PHEL - Public Health and Environmental Laboratories

PHI - Protected Health Information

PPE - Personal Protective Equipment

Quarantine - See I/Q

RPOT - Regional Planning/Operations Team

RUI - Report Under Investigation

SARS - Severe Acute Respiratory Syndrome

SARS Co-V - Severe Acute Respiratory Syndrome coronavirus

SCCMCT - State Case/Contact Management Coordination Team

Surveillance - the ongoing systematic collection, analysis, and interpretation of outcome-specific data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know. Epidemiologic activities would include identification, evaluation, and monitoring of contacts.

Sentinel Physician Surveillance - enhanced passive surveillance with physicians as the reporting entity

Surveillance, active - surveillance initiated by a health department

Surveillance, enhanced passive - surveillance initiated by the source of data, often a health care provider or clinical laboratory rather than a health department

Surveillance, sentinel - to identify the initial introduction of a disease as soon as possible to prevent an extensive and sustained outbreak.

URP - Universal Respiratory Precautions: practices that help decrease the transmission of SARS and other respiratory pathogens.

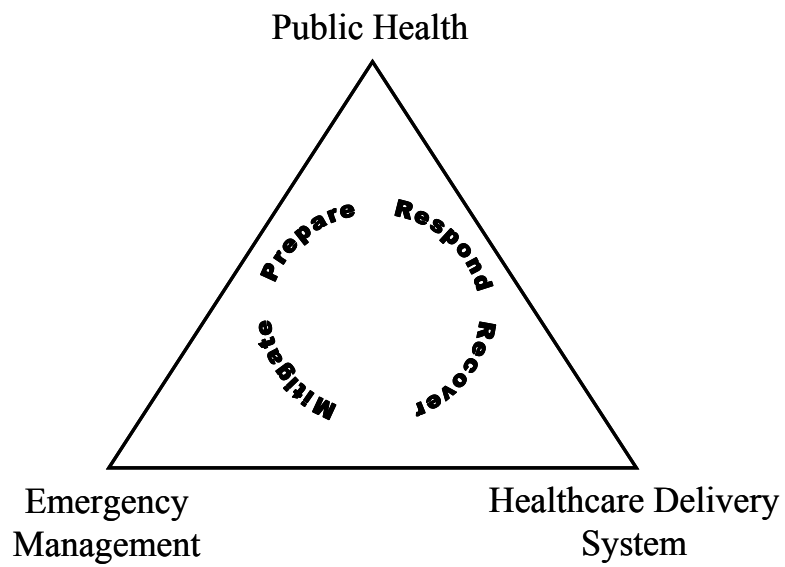
VOAD - Volunteer Organizations Active in Disaster

WHO - World Health Organization

Work Quarantine - an exposure management tool for the public health care delivery system and its workers who have had limited exposure to SARS. Workers are to travel alone to and from work, undergo temperature and general health monitoring upon arrival and departure from work, and remain at home when not at work.

## Appendix C

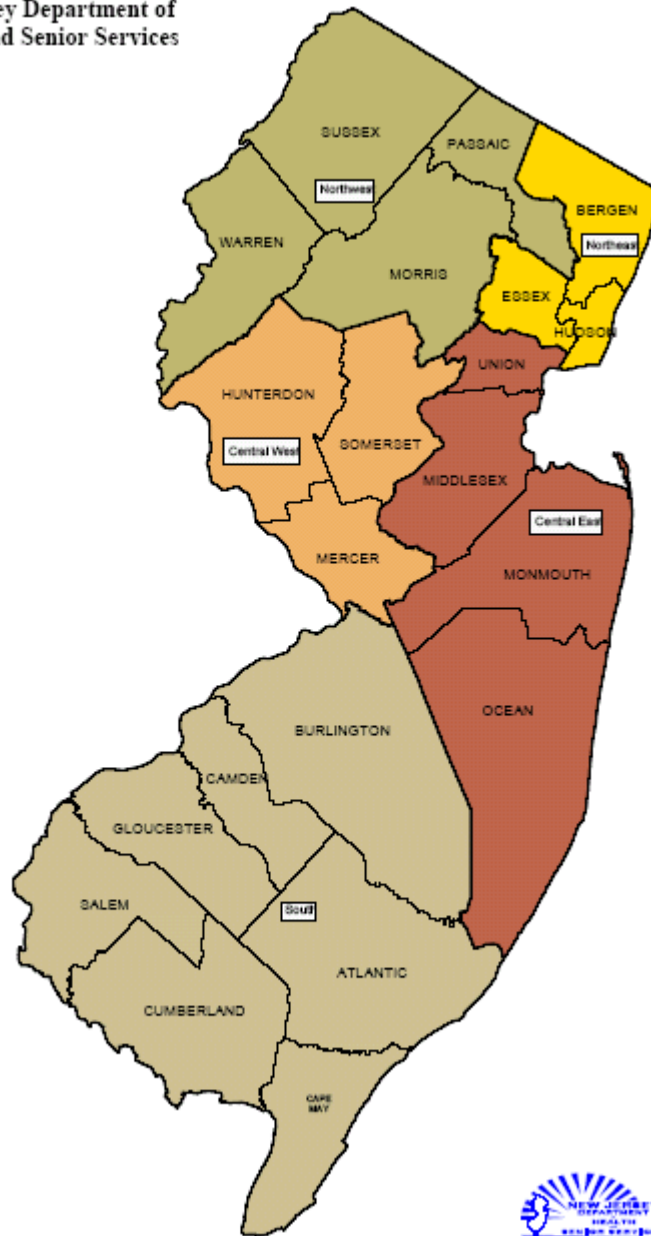
### Emergency Preparedness and Response Triad



## Appendix D

### Five Planning Regions

New Jersey Department of  
Health and Senior Services  
Sections



## Appendix E

### Guidance Related to Blood Donations

During September 2003, the FDA issued guidance entitled “Revised Recommendations for the Assessment of Donor Suitability and Blood Product Safety in Cases of Suspected Severe Acute Respiratory Syndrome (SARS) or Exposure to SARS: Final Guidance,” available at <http://www.fda.gov/cber/gdlms/sarsbldgd.htm>. This guidance was directed to U.S. blood establishments as safeguard measures to protect the blood supply against SARS.

In brief, current FDA regulations require that a donor be in good health at the time of donation. Standard procedures already in place should serve as an effective safeguard against donation by a potential donor with symptoms. The additional SARS guidance sets forth measures for temporarily deferring potential donors who may have been exposed recently to SARS or have experienced acute SARS. These measures include limited additional questioning of potential donors to help ascertain if they may be at elevated risk for SARS, due to epidemiologic criteria as defined by CDC. In addition, the guidance calls for blood establishments to actively encourage those who have already donated to report any SARS-related exposure that occurred within 14 days before donation or SARS illness or treatment occurring within 28 days prior to their donation. Donors should also be encouraged to report SARS illness or treatment that occurs within 14 days after donation. Donated units identified as having come from potentially SARS-exposed or infected donors will be quarantined and indefinitely kept out of the general blood supply.

FDA has recommended that blood establishments report cases of SARS in either donors or blood recipients to their respective state or local public health departments. In the event that NJDHSS receives such reports, NJDHSS will obtain additional information from reporting blood establishments and will facilitate diagnostic testing and implement case management/contact tracing activities as needed.

[N.B. This guidance does not state that blood banks will be doing any laboratory screening tests, and that screening is mainly from donor interviews—NJDHSS will need to facilitate this lab testing, unless CDC/FDA decide on an acceptable lab test that blood establishments will use.]

## Appendix F

### CDC Influenza Activity Levels (updated September 2003)

Activity Level	ILI activity*/Outbreaks		Laboratory data
<b>No activity</b>	Low	<b>And</b>	No lab confirmed cases <sup>†</sup>
<b>Sporadic</b>	Not increased	<b>And</b>	Isolated lab-confirmed cases
	<b>OR</b>		
	Not increased	<b>And</b>	Lab confirmed outbreak in one institution <sup>‡</sup>
<b>Local</b>	Increased ILI in 1 region**; ILI activity in other regions is not increased	<b>And</b>	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
	<b>OR</b>		
	2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased	<b>And</b>	Recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions
<b>Regional</b> (doesn't apply to states with ≤ 4 regions)	Increased ILI in ≥ 2 but less than half of the regions	<b>And</b>	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
	<b>OR</b>		
	Institutional outbreaks (ILI or lab confirmed) in ≥ 2 and less than half of the regions	<b>And</b>	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
<b>Widespread</b>	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least half of the regions	<b>And</b>	Recent (within the past 3 weeks) lab confirmed influenza in the state.

\* ILI activity can be assessed using a variety of data sources including sentinel providers, school/workplace absenteeism, and other syndromic surveillance systems that monitor influenza-like illness.

<sup>†</sup> Lab confirmed case = case confirmed by rapid diagnostic test, antigen detection, culture, or PCR. Care should be given when relying on results of point of care rapid diagnostic test kits during times when influenza is not circulating widely. The sensitivity and specificity of these tests vary and the predictive value positive may be low outside the time of peak influenza activity. Therefore, a state may wish to obtain laboratory confirmation of influenza by testing methods other than point of care rapid tests for reporting the first laboratory confirmed case of influenza of the season.

<sup>‡</sup> Institution includes nursing home, hospital, prison, school, etc.

\*\*Region: population under surveillance in a defined geographical subdivision of a state. A region could be comprised of 1 or more counties and would be based on each state's specific circumstances. Depending on the size of the state, the number of regions could range from 2 to approximately 12. The definition of regions would be left to the state but existing state health districts could be used in many states. Allowing states to define regions would avoid somewhat arbitrary county lines and allow states to make divisions that make sense based on geographic population clusters. Focusing on regions larger than counties would also improve the likelihood that data needed for estimating activity would be available.

## Appendix G

### **New Jersey Department of Health and Senior Services (NJDHSS) Management of Persons with Illnesses Suggestive of SARS** *(as of December 11, 2003)*

The following guidelines on the management of persons with illnesses suggestive of SARS have been adapted from materials available from the Centers for Disease Control and Prevention (CDC) and the New York City Department of Health and Mental Hygiene. These guidelines include information on:

- Clinical description of SARS
- Case definitions
  - CDC case classification
    - Reports under investigation
    - SARS-CoV disease classification
  - Clinical criteria
  - Epidemiologic criteria
  - Laboratory criteria
  - Exclusion criteria
  - Footnotes
  - Summary table of case definitions
- Prophylaxis and treatment
- Diagnosis, clinical evaluation and laboratory testing
- Reporting individuals who meet SARS case definitions
- Interpretation of SARS laboratory test results
- Evaluation and management of patients requiring hospitalization for radiographically confirmed pneumonia, in the absence of SARS-CoV disease activity worldwide
  - Algorithm for evaluation and management of patients requiring hospitalization for radiographically confirmed pneumonia, in the absence of SARS-CoV disease activity worldwide
- Evaluation and management of patients, in the presence of SARS activity worldwide
  - Management of SARS cases in the symptomatic phase
    - Inpatient management
    - Outpatient management
  - Management of SARS cases in the convalescent phase
    - Inpatient management
    - Outpatient management
  - Management of individuals who had close contact with a SARS case
    - Definitions
    - Household contacts with exposure to SARS patients
    - Health care workers with exposure to SARS patients

- Others (non-household, non-health care workers) with possible exposure to SARS
- Algorithm for management of persons with fever or respiratory symptoms when SARS-CoV activity is occurring in the world

For additional information, please refer to the following CDC websites:

- “Information for Clinicians,” available at <http://www.cdc.gov/ncidod/sars/clinicians.htm>
- “In the Absence of SARS-CoV Transmission Worldwide: Guidance for Surveillance, Clinical and Laboratory Evaluation, and Reporting,” available at <http://www.cdc.gov/ncidod/sars/absenceofsars.htm>
- “Clinical Guidance on the Identification and Evaluation of Possible SARS-CoV Disease among Persons Presenting with Community-Acquired Illness,” available at <http://www.cdc.gov/ncidod/sars/clinicalguidance.htm>

## Clinical Description

*The following describes the current understanding of the clinical presentation of SARS, as of December 2003, based on data from CDC, available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5212a5.htm>, <http://www.cdc.gov/ncidod/sars/clinicians.htm>, <http://www.cdc.gov/ncidod/sars/updatedguidance.htm> and [http://www.cdc.gov/ncidod/sars/pdf/smp\\_titlepages.pdf](http://www.cdc.gov/ncidod/sars/pdf/smp_titlepages.pdf).*

### Clinical features

The median incubation period for SARS appears to be approximately 4 to 6 days; most patients become ill within 2 to 10 days after exposure. Early clinical features of SARS-CoV disease can be similar to other viral illnesses and are not sufficiently distinct to enable diagnosis by signs and symptoms alone. The illness usually begins with systemic symptoms such as fever, headache, and myalgias. Respiratory complaints often develop 2 to 7 days after illness onset and usually include a non-productive cough and dyspnea but not upper respiratory symptoms such as rhinorrhea and sore throat. Almost all patients with laboratory evidence of SARS-CoV infection evaluated to date developed radiographic evidence of pneumonia by day 7-10 of illness, and most (70% -90%) developed lymphopenia. The overall case-fatality rate of approximately 10% can increase to >50% in persons older than age 60.

#### Key Clinical Features of SARS-CoV Disease

- Incubation period of 2-10 days
- Early systemic symptoms followed within 2-7 days by dry cough and/or shortness of breath, often without upper respiratory tract symptoms
- Development of radiographically confirmed pneumonia by day 7-10 of illness
- Lymphopenia in most cases

### Transmission

Epidemiologic features of SARS provide keys to its diagnosis and control. The pattern of spread suggests that SARS-CoV is transmitted primarily through droplets and close personal contact. Studies documenting stability of the virus for days in the environment suggest the possibility of fomite transmission. There is also suggestive evidence that, in a few instances, SARS-CoV may have been transmitted by small-particle aerosols. Epidemiologic data suggest that infected persons do not transmit SARS-CoV before the onset of symptoms and that most transmission occurs late in the course of illness when patients are likely to be hospitalized. The lack of transmission before symptom onset and during early illness explains the infrequency of community transmission and the preponderance of hospital-associated transmission. Although evidence indicates that most

patients do not transmit SARS-CoV efficiently, documentation of “super-spreaders” and “super-spreading events” shows that, in certain situations, the virus can be transmitted very efficiently.

## Case Definitions

Surveillance case definitions are to be used for identifying and classifying cases, both of which are often done retrospectively, for national reporting purposes. For many conditions of public health importance, action to contain disease should be initiated as soon as a problem is identified; in many circumstances, appropriate public health action should be undertaken even though sufficient information is not yet available to determine whether cases meet the case definition. Surveillance case definitions should not be used to guide clinical management or as the only criterion for identifying or testing patients who might have SARS or for instituting infection control precautions.

The CDC SARS case definition is subject to change, based on evolving information about SARS activity worldwide, and the most current version can be found at <http://www.cdc.gov/ncidod/sars/>. At this time, CDC has adopted CSTE's December 2003 case definition (which also includes the clinical, epidemiologic, and exclusion criteria outlined in this plan).

The CDC SARS case definition is based on clinical, epidemiologic and laboratory information. To this end, this section is divided into the following sections:

- CDC Case Classification
  - SARS Reports Under Investigation
  - SARS-CoV Disease Classification
- Clinical Criteria
- Epidemiologic Criteria
- Laboratory Criteria
- Exclusion Criteria
- Footnotes
- Summary Table, Case Definitions

### CDC Case Classification

During the Spring 2003 SARS outbreak, CDC used the terms “suspect,” “probable,” and “confirmed” to describe SARS cases. According to the December 2003 CSTE case definition (adopted by CDC), there are now two categories of case classification: “SARS Reports Under Investigation (RUI)” and “SARS-CoV Disease Classification” (which includes probable and confirmed cases).

- ***SARS reports under investigation (RUI):***
  - ***Reports in persons from areas where SARS is not known to be active***
    - RUI-1: Patients with severe illness compatible with SARS in groups likely to be first affected by SARS-CoV<sup>7</sup> if SARS-CoV is introduced from a person without clear epidemiologic links to known SARS-CoV disease or places with known ongoing transmission of SARS-CoV.
  - ***Reports in persons from areas where SARS activity is occurring***
    - RUI-2: Patients who meet the current clinical criteria for mild-moderate illness and the epidemiologic criteria for possible exposure (Spring 2003 CDC definition for suspect cases<sup>8</sup>).
    - RUI-3: Patients who meet the current clinical criteria for severe illness and epidemiologic criteria for possible exposure (Spring 2003 CDC definition for probable cases<sup>8</sup>).
    - RUI-4: Patients who meet the clinical criteria for early or mild-moderate illness and the epidemiologic criteria for likely exposure to SARS-CoV.
- ***SARS-CoV Disease Classification***
  - *Probable case of SARS-CoV*: a person who meets the clinical criteria for severe respiratory illness and who meets the epidemiologic criteria for likely exposure to SARS-CoV.
  - *Confirmed SARS-CoV case*: a person who has a clinically compatible illness (early, mild, moderate or severe disease) that is laboratory confirmed.

### Clinical Criteria

- ***Early illness***
  - Presence of two or more of the following features: fever (may be subjective); chills; rigors; myalgia; headache; diarrhea; sore throat; rhinorrhea.
- ***Mild to moderate respiratory illness***
  - Temperature of >100.4° F (>38° C)<sup>1</sup>, and
  - One or more clinical findings of lower respiratory illness (e.g., cough, shortness of breath, difficulty breathing).
- ***Severe respiratory illness***
  - Meets clinical criteria of mild-moderate respiratory illness, and
  - One or more of the following:
    - Radiographic evidence of pneumonia, or
    - Acute respiratory distress syndrome, or
    - Autopsy findings consistent with pneumonia or acute respiratory distress syndrome without an identifiable cause.

## Epidemiologic Criteria

- *Possible exposure to SARS-CoV*
  - One or more of the following exposures in the 10 days before onset of symptoms:
    - Travel to a foreign or domestic location with documented or suspected recent local transmission of SARS-CoV<sup>3</sup>
    - Close contact<sup>2</sup> with a person with mild-moderate or severe respiratory illness and with history of travel in the 10 days before onset of symptoms to a foreign or domestic location with documented or suspected recent local transmission of SARS – CoV<sup>3</sup>.
- *Likely exposure to SARS-CoV*
  - One or more of the following exposures in the 10 days before onset of symptoms:
    - Close contact<sup>2</sup> with a confirmed case of SARS-CoV disease
    - Close contact<sup>2</sup> with a person with mild-moderate or severe respiratory illness for whom a chain of transmission can be linked to a confirmed case of SARS-CoV disease in the 10 days before onset of symptoms

## Laboratory Criteria

Tests to detect SARS-CoV were developed rapidly. These tests are still being refined and their performance characteristics assessed.<sup>4</sup> Thus, criteria for laboratory diagnosis of SARS-CoV are changing. In principle, the following are the general criteria for laboratory confirmation of SARS-CoV:

- Detection of serum antibody to SARS-CoV by a test validated by CDC (e.g., enzyme immunoassay [EIA]), *or*
- Isolation in cell culture of SARS-CoV from a clinical specimen, *or*
- Detection of SARS-CoV RNA by a reverse transcription-polymerase chain reaction (RT-PCR) test validated by CDC and with subsequent confirmation in a reference laboratory (e.g., CDC)

Information on the current criteria for laboratory diagnosis of SARS-CoV infection is available at <http://www.cdc.gov/ncidod/sars/labdiagnosis.htm>.

## Exclusion Criteria

A person may be excluded as a “Report Under Investigation,” including as a CDC-defined probable SARS-CoV case, if any of the following apply:

- An alternative diagnosis can fully explain the illness.<sup>5</sup>

- Antibody to SARS-CoV is undetectable in a serum specimen obtained >28 days after onset of illness.<sup>6</sup>
- The case was reported on the basis of contact with a person who was subsequently excluded as a case of SARS-CoV, then the reported case is also excluded, provided other epidemiologic criteria or laboratory criteria are not present.

### Footnotes

1. A measured documented temperature of >100.4° F (>38° C) is expected. However, clinical judgment may allow a small proportion of patients without a documented fever to meet this criterion. Factors that might be considered include patient self-report of fever, use of antipyretics, presence of immunocompromising conditions or therapies, lack of access to health care, or inability to obtain a measured temperature. Initial case classification based on reported information may change and reclassification may be required.

2. Close contact is defined as having cared for or lived with a person with SARS or having a high likelihood of direct contact with respiratory secretions and/or body fluids of a person with SARS (during encounters with the patient or through contact with materials contaminated by the patient), either during the period the person was clinically ill or within 10 days of resolution of fever. Examples of close contact include kissing or embracing, sharing eating or drinking utensils, close conversation (<3 feet), physical examination, and any other direct physical contact between persons. Close contact does not include activities such as walking by a person or sitting across a waiting room or office for a brief time.

3. Types of locations specified will vary (e.g., country, airport, city, building, floor of building). The last date a location may be a criterion for exposure for illness onset is 10 days (one incubation period) after removal of that location from CDC travel alert status. The case-patient's travel should have occurred on or before the last date the travel alert was in place. Transit through a foreign airport meets the epidemiologic criteria for possible exposure in a location for which a CDC travel advisory is in effect. For information on CDC travel alerts and advisories and assistance in determining appropriate dates, see <http://www.cdc.gov/ncidod/sars/travel.htm>.

4. The identification of the etiologic agent of SARS (SARS-CoV) led to the rapid development of enzyme immunoassays (EIA) and immunofluorescence assays (IFA) for serologic diagnosis and reverse-transcription PCR (RT-PCR) assays for detection of SARS-CoV RNA in clinical samples. These assays can be very sensitive and specific for detecting antibody and RNA, respectively, in the later stages of SARS-CoV disease. Both are less sensitive, however, for detecting infection early in illness. Most patients in the early stages of SARS-CoV disease have a low titer of virus in respiratory and other secretions and require time to mount an antibody response. SARS-CoV antibody tests may be positive as early as 8-10 days after onset of illness and often by 14 days after onset of illness, but sometimes not until 28 days after onset of illness. Information on the

current criteria for laboratory diagnosis of SARS-CoV is available at <http://www.cdc.gov/ncidod/sars/labdiagnosis.htm>.

5. Factors that may be considered in assigning alternate diagnoses include the strength of the epidemiologic exposure criteria for SARS-CoV disease, the specificity of the alternate diagnostic test, and the compatibility of the clinical presentation and course of illness for the alternative diagnosis.

6. Current data indicate that more than 95% of SARS patients mount an antibody response to SARS-CoV. However, health officials may choose not to exclude a case based on lack of a serologic response if reasonable concern exists that an antibody response could not be mounted.

7. Consensus guidance between CDC and CSTE on which groups are most likely to be first affected by SARS-CoV if it re-emerges is in development. In principle, SARS-CoV infection should be considered *at a minimum* in the differential diagnosis for persons requiring hospitalization for radiographically confirmed pneumonia or acute respiratory distress syndrome without identifiable etiology AND who have one of the following risk factors in the 10 days before the onset of illness

- Travel to mainland China, Hong Kong, or Taiwan, or close contact with an ill person with a history of recent travel to one of these areas, *OR*
- Employment in an occupation associated with a risk for SARS-CoV exposure (e.g., healthcare worker with direct patient contact; worker in a laboratory that contains live SARS CoV), *OR*
- Part of a cluster of cases of atypical pneumonia without an alternative diagnosis

Guidelines for the identification, evaluation and management of these persons are available at <http://www.cdc.gov/ncidod/sars/sarsprepplan.htm>.

8. During the Spring-Summer 2003 outbreak of SARS, the CDC case definitions were:

- *Suspect Case*
  - Meets the clinical criteria for mild-moderate respiratory illness and the epidemiologic criteria for *possible* exposure to SARS-CoV, but does not meet any of the laboratory criteria and exclusion criteria, or
  - Unexplained acute respiratory illness resulting in death in a person on whom an autopsy was not performed and who meets the epidemiologic criteria for possible exposure to SARS-CoV, but does not meet any of the laboratory criteria and exclusion criteria.
- *Probable Case*
  - Meets the clinical criteria for severe respiratory illness and the epidemiologic criteria for *possible* exposure to SARS-CoV, but does not meet any of the laboratory criteria and exclusion criteria.

Summary Table, Case Definitions

						Clinical Criteria			Epidemiologic Criteria		Laboratory Criteria
						Early	Mild-Moderate	Severe	Possible	Likely	Confirmed
Case Classification	Reports Under Investigation (RUI)	Reports from areas where SARS <u>not</u> known to be active	RUI-1			X	No clear epidemiologic links to known SARS-CoV cases or place with known ongoing transmission of SARS-CoV				
		Reports from areas where SARS activity <u>is</u> occurring	RUI-2		X		X				
			RUI-3			X	X				
			RUI-4	X	X			X			
	SARS CoV Disease Classification		Probable SARS-CoV Case			X		X			
			Confirmed SARS-CoV Case	X	X	X			X		

## **Prophylaxis and Treatment**

*The following information has been adapted from CDC's "Treatment" (updated March 25, 2003) website, available at <http://www.cdc.gov/ncidod/sars/treatment.htm>, and CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS", available at [http://www.cdc.gov/ncidod/sars/pdf/smp\\_titlepages.pdf](http://www.cdc.gov/ncidod/sars/pdf/smp_titlepages.pdf).*

No specific treatment recommendations have been made at this time. Empiric therapy should include coverage for organisms associated with any community-acquired pneumonia of unclear etiology, including agents with activity against both typical and atypical respiratory pathogens. Treatment choices may be influenced by severity of the illness. Infectious disease consultation is recommended.

No vaccines have yet been developed for SARS and no anti-viral treatment has been shown to be effective. CDC, the National Institutes of Health, the Food and Drug Administration and academicians are developing protocols to assess antiviral drugs that show activity in vitro against SARS-CoV. It is not yet clear whether persons who recover from SARS-CoV infection develop long-lasting protective immunity or whether they are susceptible to re-infection and disease, as is the case with other human coronaviruses.

## Diagnosis, Clinical Evaluation, and Laboratory Testing

*The following information has been adapted from CDC's "Diagnosis/Evaluation" (as of October 14, 2003) website, available at <http://www.cdc.gov/ncidod/sars/diagnosis.htm>, and CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS", available at [http://www.cdc.gov/ncidod/sars/pdf/smp\\_titlepages.pdf](http://www.cdc.gov/ncidod/sars/pdf/smp_titlepages.pdf), and "In the Absence of SARS-CoV Transmission Worldwide: Guidance for Surveillance, Clinical and Laboratory Evaluation, and Reporting," available at <http://www.cdc.gov/ncidod/sars/absenceofsars.htm>.*

### General testing guidelines

Diagnostic tests to identify other causes of respiratory infections will be critical to assist health care practitioners and public health officials in decisions about isolation and quarantine of suspect SARS patients. Initial diagnostic testing for suspected SARS patients should include chest radiograph, pulse oximetry, complete blood count with differential, blood cultures, sputum Gram stain and culture, bacterial cultures, and testing for viral respiratory pathogens, notably influenza A and B and respiratory syncytial virus. A specimen for Legionella and pneumococcal urinary antigen testing should also be considered. Clinicians should save any available clinical specimens (respiratory, blood, and serum) for additional testing until a specific diagnosis is made.

### SARS-CoV testing

In the absence of known SARS-CoV transmission, the positive predictive value of a diagnostic test is extremely low. False-positive test results may generate tremendous anxiety and concern and expend valuable public health resources. Therefore, **SARS-CoV testing should be performed judiciously, and preferably only in consultation with the local or state health department.** SARS-CoV testing should be considered if no alternative diagnosis is identified 72 hours after initiation of the clinical evaluation and the patient is thought to be at high risk for SARS-CoV disease (e.g., is part of a cluster of unexplained pneumonia cases).

Two assays are most often used to diagnose SARS CoV infection: PCR assays for viral RNA and serologic assays for virus-specific antibodies. Both assays can be very specific and sensitive in detecting RNA and antibodies, respectively. However, because of the low titer of virus in clinical specimens from most patients and the time it takes persons to mount an antibody response to infection, neither assay can reliably detect SARS-CoV infection early in illness. Interpretation of these assays needs to account for the possibility of false-negative results, which are frequent occurrences early in infection, and false-positive results, which are especially important concerns for PCR assays.

Acute and convalescent (greater than 28 days after onset of symptoms) serum samples should be collected from each patient who meets the SARS case definition. Paired sera and other clinical specimens can be forwarded through NJDHSS for testing at CDC.

All respiratory specimens should be collected within 72 hours of illness onset.

**Physicians or persons submitting clinical specimens will need to work with hospitals, LHDs and/or NJDHSS to ensure appropriate packaging and transportation of specimens for testing.** PHEL form SRD1 should accompany specimens. Please contact the NJDHSS Infectious and Zoonotic Program at 609-588-7500 or 609-588-3121 to arrange testing.

For additional specific information on specimen collection, please refer to CDC's "Guidelines for Collecting Specimens from Potential SARS Patients," available at [http://www.cdc.gov/ncidod/sars/specimen\\_collection\\_sars2.htm](http://www.cdc.gov/ncidod/sars/specimen_collection_sars2.htm).

### Environmental testing

In anticipation of requests that may arise for environmental testing to evaluate transmission risks, safety concerns about work environments, or decontamination procedures, CDC is developing guidelines that will include information on the role and utility of testing, the appropriate specimen collection, transport, and storage, as well as the recommended test procedures for PCR and/or viral culture. To assist public health officials in responding to requests, a joint statement from CDC, the Council of State and Territorial Epidemiologists, and the Association of Public Health Laboratories, will also need to be developed that states

*[N.B. this excerpt is from CDC's draft document summarizing the SARS preparedness planning meeting in August 2003]:*

*Environmental sampling for SARS-CoV is strictly a research issue. There are no clearly defined protocols for collecting, analyzing, or interpreting results from such sampling. Limited environmental sampling and testing may be conducted as part of applied research efforts by CDC in collaboration with state and local public health epidemiologists to assist in explaining transmission.*

## **Reporting Individuals Who Meet SARS Case Definitions**

Health care providers and public health personnel should immediately report individuals who meet the SARS case definition (as described in “Case Definitions” section in this appendix) to the Infectious and Zoonotic Disease Program of the NJDHSS. NJDHSS epidemiologists are available at all times to assist in the management of these cases.

- Monday-Friday, 8am-5pm: 609-588-7500 or 609-588-3121
- Weekends/holidays/after hours: 609-392-2020

## Interpretation of SARS Laboratory Test Results

Information regarding SARS laboratory testing may change as more information becomes available. Currently, the following information (adapted from CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS, Supplement F: Laboratory Diagnosis, Appendix F5: Fact Sheet for Clinicians," at [http://www.cdc.gov/ncidod/sars/pdf/smp\\_supplementf.pdf](http://www.cdc.gov/ncidod/sars/pdf/smp_supplementf.pdf)) is available about interpretation of SARS-CoV test results.

### Key points

- A positive RT-PCR test result for SARS-CoV should be considered provisional until the result and infection status are confirmed by independent testing.
- A negative test result for SARS-CoV usually does not rule out SARS and should not affect patient management or infection control measures.

### Important Definitions

<u>Term</u>	<u>Definition</u>
SARS	Severe acute respiratory syndrome. A clinical syndrome characterized by fever, lower respiratory symptoms, and radiographic evidence of pneumonia.
SARS-CoV	SARS-associated coronavirus. A newly described coronavirus that is genetically and antigenically distinct from other human coronaviruses.
SARS-CoV infection	A condition wherein a patient is infected with SARS-CoV.
SARS-CoV positive (refers to a specimen)	A clinical or laboratory specimen that is demonstrated by using a validated and appropriately controlled assay to have SARS-CoV antigen or RNA or antibodies reactive with SARS-CoV antigens.
Seroconversion	<ul style="list-style-type: none"><li>• A four-fold, or greater, increase in antibody titer between acute- and convalescent-phase serum specimens tested in parallel or,</li><li>• Negative antibody test on acute-phase serum with positive test on convalescent-phase serum tested in parallel.</li></ul>
RT-PCR positive for SARS-CoV (refers to a patient)	SARS-CoV RNA detected using a validated assay from: <ul style="list-style-type: none"><li>• At least two different clinical specimens, or</li><li>• The same type of clinical specimen collected on two, or more, occasions during the course of illness.</li></ul>
Laboratory confirmed SARS-CoV infection	<ul style="list-style-type: none"><li>• Seroconversion to SARS-CoV, or</li><li>• PCR positive for SARS-CoV based on concordant results from testing conducted in two independent laboratories.</li></ul>

### What tests for SARS-CoV are available?

CDC has developed and validated an enzyme immunoassay (EIA) for detection of serum antibody to SARS-CoV, and a reverse transcription-polymerase chain reaction (RT-PCR) assay, for detection of SARS-CoV RNA. The EIA has been distributed to most state public health laboratories and the RT-PCR has been distributed to most laboratories in the Laboratory Response Network (LRN). Both the EIA and RT-PCR tests are sensitive and highly specific for SARS-CoV. The ability to diagnose SARS-CoV infection in the patient, however, is often limited by either the low concentration of virus in most clinical specimens (RT-PCR assays) or by the time it takes a person to mount a measurable antibody response to SARS (serologic assays). The likelihood of detecting infection is increased if multiple specimens, e.g. stool, serum, and respiratory tract specimens, are collected at several times during the course of illness.

1. CDC considers detection of SARS-CoV antibody as the most reliable indicator of infection. Since previous infection is still rare in most populations, seroconversion is not needed to diagnose infection. Therefore, the presence of SARS-CoV antibody in someone without a previous history of SARS is indicative of recent infection. Serologic tests can rule out SARS infection if the serum specimen is collected >28 days after onset of illness. Some people do not mount an antibody response (test positive) until more than 28 days after onset of illness. Patients with a negative antibody test result whose specimens were obtained 28 or fewer days after illness onset should have another serum specimen collected >28 days after onset of symptoms.
2. Reverse transcription-polymerase chain reaction (RT-PCR) for SARS-CoV RNA is a very sensitive and specific assay when performed appropriately. This test can detect SARS-CoV RNA in serum, stool, upper and lower respiratory specimens, various tissues and occasionally urine specimens. Testing multiple specimen types at several times during the course of illness should increase the likelihood of detecting infection.
3. Other tests for detection of SARS-CoV infection include immunofluorescence assay (IFA) for SARS antibody, SARS-CoV isolation studies, electron microscopic studies, and immunohistologic or in situ hybridization studies on tissue specimens. The IFA assays for SARS-CoV antibody gives results essentially identical to those for the EIA for SARS antibody. Cell culture, electron microscopy and histologic studies are less frequently used and less sensitive than RT-PCR. Cell culture for SARS-CoV should only be done under BSL3 conditions in BSL3 laboratory (see the biosafety guidelines at [www.cdc.gov/ncidod/sars/sarslabguide.htm](http://www.cdc.gov/ncidod/sars/sarslabguide.htm) )

### What does it mean if a patient with SARS has a positive test result for SARS-CoV?

Laboratory test results should always be considered together with clinical observations and epidemiologic data in making a final diagnosis. A positive PCR result should be confirmed by a qualified second laboratory to ensure that this result is not an artifact of laboratory contamination. A positive serologic result is less likely to result from a laboratory artifact, but should also be subjected to confirmatory testing. If the results are confirmed, then a positive RT-PCR or serologic test result indicates that the patient has been recently infected with SARS-CoV (unless they have a previous history of SARS).

### How is a SARS-CoV test confirmed?

Positive antibody tests should be confirmed by retesting the specimens in an independent laboratory. Positive RT-PCR results should be confirmed by repeat testing of the original specimen AND by testing of the same specimen in an independent lab using a validated assay.

### What does it mean if a patient with SARS has a negative test result for SARS-CoV?

The only conclusive rule out test for SARS-CoV is a negative antibody result on a serum specimen collected >28 days after onset of illness. A negative antibody result on serum specimens collected  $\leq 28$  days after onset of illness or a negative RT-PCR test does not rule out SARS-CoV infection. Clinical specimens do not always have sufficient virus to be detected by RT-PCR and an antibody response may not be detected in some patients until >28 days after onset of illness. With the exception of a >28 antibody test, a negative test result should not affect patient management or infection control decisions. If SARS continues to be a diagnostic concern, additional specimens should be collected and tested.

### What does it mean if the test results are positive for other respiratory diseases?

A positive test results for another respiratory pathogen does not rule out SARS-CoV infection. SARS patients can be co-infected with SARS-CoV and other respiratory pathogens. Thus, detection of another respiratory pathogen does not eliminate the possibility of SARS-CoV infection. In some circumstances, however, detection of another respiratory pathogen may help rule out SARS-CoV infection, e.g. the other pathogen is detected in multiple patients in a cluster of cases and can fully explain the severity of illness.

### Should a patient with SARS who has a negative SARS-CoV test result continue to be held using isolation precautions recommended by CDC and other public health authorities?

As noted above, the interpretation of negative SARS-CoV test results varies depending on the type of specimen, timing of specimen collection, and the test was performed. With the exception of a >28 day negative serologic test result, a negative SARS-CoV test result should not affect patient isolation or management decisions. The clinical features of the illness and the type and risk of exposure are the keys to making patient management and isolation decisions.

All SARS patients should limit interactions outside the home and should not go to work, school, out-of-home childcare, or other public areas until 10 days after resolution of fever and respiratory symptoms. During this time, the infection control precautions for SARS patients should be followed ([www.cdc.gov/ncidod/sars/ic-closecontacts.htm](http://www.cdc.gov/ncidod/sars/ic-closecontacts.htm) ).

Has the new information about SARS-CoV changed the recommendations for medical treatment for patients with SARS?

The discovery that SARS-CoV is the cause of SARS has not changed treatment recommendations. Research is currently underway to determine if an effective anti-viral treatment for SARS-CoV can be found.

Should a person who traveled to an area where there is community transmission (see the case definition at [www.cdc.gov/ncidod/sars/casedefinition.htm](http://www.cdc.gov/ncidod/sars/casedefinition.htm) ) of SARS or who had contact with a SARS patient be tested even if not ill?

People who have potentially been exposed to SARS patients and are well should only be tested as part of research studies. The exposed person may contact their state health department or CDC about participating in studies of persons exposed to SARS.

## Evaluation and Management of Patients Requiring Hospitalization for Radiographically Confirmed Pneumonia, in the Absence of SARS-CoV Disease Activity Worldwide

CDC has issued the following documents with detailed guidance:

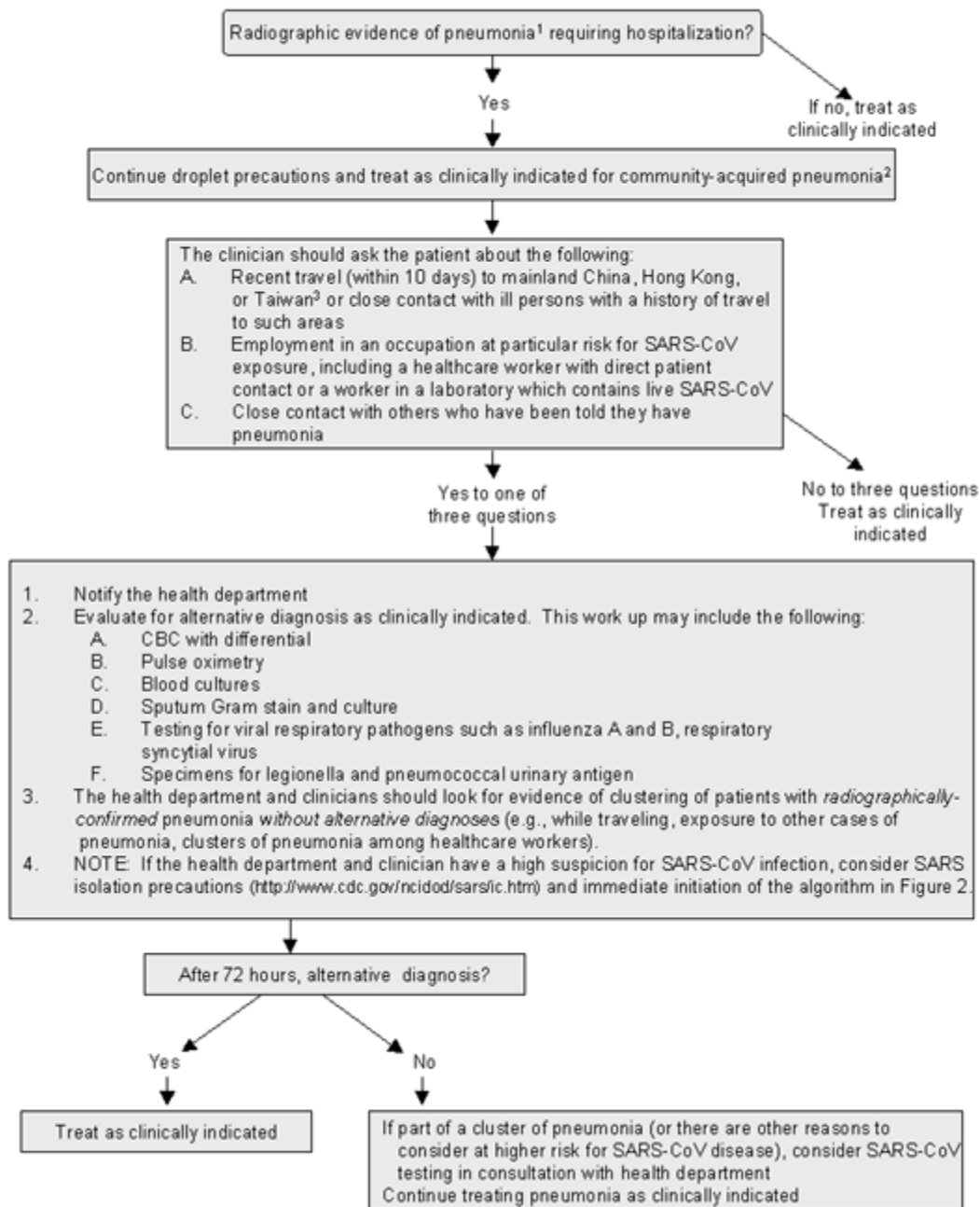
- “In the Absence of SARS-CoV Transmission Worldwide: Guidance for Surveillance, Clinical and Laboratory Evaluation, and Reporting,” available at <http://www.cdc.gov/ncidod/sars/absenceofsars.htm>
- “Clinical Guidance on the Identification and Evaluation of Possible SARS-CoV Disease among Persons Presenting with Community-Acquired Illness,” available at <http://www.cdc.gov/ncidod/sars/clinicalguidance.htm>

In the absence of any documented cases of SARS-CoV disease worldwide, the overall likelihood that a given patient being evaluated for fever or respiratory illness has SARS-CoV disease will be exceedingly low unless there are both typical clinical findings and some accompanying epidemiologic evidence that raises the suspicion of exposure to SARS-CoV. Therefore, one approach in this setting would be to consider the diagnosis only for patients who require hospitalization for unexplained pneumonia and who have an epidemiologic history that raises the suspicion of exposure, such as recent travel to a previously SARS-affected area (or close contact with an ill person with such a travel history), employment as a healthcare worker with direct patient contact or as a worker in a laboratory that contains live SARS-CoV, or an epidemiologic link to a cluster of cases of unexplained pneumonia. Once SARS-CoV activity has been documented anywhere in the world, the positive predictive value of even early clinical symptoms (e.g., fever or respiratory symptoms in the absence of pneumonia), while still low, may be improved if used in combination with an epidemiologic link to settings in which SARS-CoV has been documented. In that context, the following key points and algorithm should be considered in the evaluation and management of patients who present from the community with febrile respiratory illnesses.

**In the absence of SARS-CoV transmission anywhere in the world, the diagnosis of SARS-CoV disease should be considered only in** patients who require hospitalization for radiographically confirmed pneumonia and who have an epidemiologic history that raises the suspicion of SARS-CoV disease. The suspicion for SARS-CoV disease is raised if, within 10 days of symptom onset, the patient:

- Has a history of recent travel to mainland China, Hong Kong, or Taiwan (see Figure 1, footnote 3) or close contact with ill persons with a history of recent travel to such areas, or
- Is employed in an occupation at particular risk for SARS-CoV exposure, including a healthcare worker with direct patient contact or a worker in a laboratory that contains live SARS-CoV, or
- Is part of a cluster of cases of atypical pneumonia without an alternative diagnosis

**Algorithm for evaluation and management of patients hospitalized with radiographic evidence of pneumonia in the absence of SARS-CoV disease activity worldwide**



## **Evaluation and Management of Patients, in the Presence of SARS Activity Worldwide**

The following guidance on management of patients in the presence of SARS activity worldwide has been adapted from information available about SARS illnesses during the Spring-Summer 2003 outbreak and from CDC's "Clinical Guidance on the Identification and Evaluation of Possible SARS-CoV Disease among Persons Presenting with Community-Acquired Illness," available at <http://www.cdc.gov/ncidod/sars/clinicalguidance.htm>.

### **Management of SARS Cases in the Symptomatic Phase**

SARS case-patients may be managed as an inpatient or outpatient basis, depending on their clinical status and need for hospitalization. Hospitalization is not required for isolation purposes alone, unless the patient is unable to be managed outside of a hospital setting.

#### **Inpatient management**

***The hospital infection control professional(s) must be notified of admitted RUIs or probable SARS case-patients to ensure that appropriate infection control practices are implemented and maintained.*** NJDHSS and LHD staff will work with infection control professionals or attending physicians to review patient's clinical status

#### **Outpatient management**

Please refer to the NJDHSS SARS Plan, Community Containment section, for specific information on home-based I/Q, and, in the event of a widespread SARS outbreak, community I/Q centers. In brief, in order for patients to be managed in the outpatient setting, the patient must:

- not require inpatient medical treatment;
- be reliable and show a willingness to follow outpatient SARS infection control guidelines;
- have access to a telephone;
- have close medical follow-up;
- be housed in an environment that allows adequate infection control practice; and
- agree to allow home visits whenever by NJDHSS and/or local health department staff.

## Management of SARS Cases in the Convalescent Phase

SARS patients enter the convalescent phase on the day when fever resolves and respiratory symptoms are improving (residual cough allowed). This convalescent phase lasts 10 days after both the fever resolves and respiratory symptoms improve. The severity of the patients' initial clinical presentations does not alter the length of the convalescent phase.

### Inpatient management

If hospitalized, the patient should remain in contact and airborne isolation for 10 days after both the fever resolves and respiratory symptoms improve. NJDHSS and LHD staff will work with infection control professionals or attending physicians to review patient's clinical status.

### Outpatient management

Please refer to the NJDHSS SARS Plan, Community Containment section, for specific information on home-based I/Q, and, in the event of a widespread SARS outbreak, community I/Q centers. In brief, in order for patients to be managed in the outpatient setting, the patient must:

- not require inpatient medical treatment;
- be reliable and show a willingness to follow outpatient SARS infection control guidelines;
- have access to a telephone;
- have close medical follow-up;
- be housed in an environment that allows adequate infection control practice; and
- agree to allow home visits whenever necessary by NJDHSS or local health department staff.

## Management of Individuals Who Had Close Contact with a SARS Case

The following guidelines apply to contacts (defined below) who are **asymptomatic**. Any **symptomatic** individual who had close contact with a SARS case should be referred for medical evaluation. Close contact that occurred prior to the onset of symptoms in the case is probably not a risk for transmission.

These management guidelines are divided into the following sections:

- Definitions of contacts
- Household contacts
- Healthcare worker contacts (HCWs)
- Others (non-household, non-healthcare workers) with possible exposure

### Definitions

*Casual Contact:* A casual contact is defined as an individual who was in the same area as a patient with suspect or probable SARS, but did not have close contact (defined below). Casual contact may be further characterized as non face-to-face exposure or minimal/indirect exposure or passing by an enclosed space. Examples of casual contact would be sitting across the waiting room from a SARS case.

*Close Contact:* A close contact is defined as caring for, having lived with, or having a high likelihood of direct contact with respiratory secretions and/or body fluids of a patient with SARS. Close contact may be further characterized as face-to-face exposure (<3 feet apart) in an enclosed space for greater than 30 minutes in close proximity to a SARS case. Examples of close contact would include: close conversation for more than 30 minutes, kissing or embracing, sharing eating or drinking utensils, physical examination, contact sports and any other physical contact.

### Management of household contacts of SARS patients

*The following information is excerpted from CDC's "Interim Guidance on Infection Control Precautions for Patients with Suspected Severe Acute Respiratory Syndrome (SARS) and Close Contacts in Households" (updated August 18, 2003) available at <http://www.cdc.gov/ncidod/sars/ic-closecontacts.htm>.*

All members of a household with a SARS patient should carefully follow recommendations for hand hygiene (e.g., frequent hand washing or use of alcohol-based hand rubs), particularly after contact with body fluids (e.g., respiratory secretions, urine, or feces). Use of disposable gloves should be considered for any direct contact with body fluids of a SARS patient. **However, gloves are not intended to replace proper hand**

**hygiene.** Immediately after activities involving contact with body fluids, gloves should be removed and discarded and hands should be cleaned. Gloves must never be washed or reused.

Household members and other close contacts of SARS patients should be actively monitored by the LHD for illness. Household members or other close contacts of SARS patients should be vigilant for fever (i.e. measure temperature twice daily) or respiratory symptoms and, if these develop, should immediately seek healthcare evaluation. **In advance of evaluation, healthcare providers should be informed that the individual is a close contact of a SARS patient so arrangements can be made, as necessary, to prevent transmission to others in the healthcare setting.** Household members or other close contacts with symptoms of SARS should follow the same precautions recommended for SARS patients.

At this time, in the absence of fever or respiratory symptoms, household members or other close contacts of SARS patients need not limit their activities outside the home.

#### Management of HCWs with exposure to SARS patients

*The following information is excerpted from CDC's "Interim Domestic Guidance for Management of Exposures to Severe Acute Respiratory Syndrome (SARS) for Health-Care Settings" (updated June 24, 2003) available at <http://www.cdc.gov/ncidod/sars/exposureguidance.htm>.*

Surveillance of health care personnel is necessary to ensure that workers who are ill receive appropriate care and are isolated to prevent transmission. Healthcare facilities (HCFs) that care for SARS patients should implement surveillance of HCWs who have any contact with SARS patients or their environment of care. NJDHSS and LHDs will work with hospitals to ensure that recommended surveillance activities are implemented, including:

- Develop and maintain a listing of all personnel who enter the rooms of SARS patients, or who are involved in the patient's care in other parts of the hospital;
- Instruct personnel who have contact with SARS patients or their environment of care to notify occupational health, infection control or their designee if they have unprotected exposure to a SARS patient or if they develop any fever or respiratory symptoms; and
- Monitor employee absenteeism for increases that may suggest emerging respiratory illness in the workforce. Notify local and state health authorities of clusters or unusual increases in respiratory illness, including atypical pneumonia.

To date, there is no evidence to suggest that SARS is transmitted from asymptomatic individuals. However, according to recent reports HCWs who developed SARS may have been a source of transmission within HCFs during the early phases of illness when symptoms were mild and not recognized as SARS. To minimize the risk of transmission from unrecognized SARS infections among HCWs, HCWs who have **unprotected high-risk exposures** to SARS should be excluded

from duty (e.g. administrative leave) for 10 days following the exposure. Unprotected high-risk exposure is defined as presence in the same room as a probable SARS patient during a high-risk aerosol-generating procedure or event and where recommended infection control precautions are either absent or breached. Aerosol-generating procedures or events include aerosolized medication treatments, diagnostic sputum induction, bronchoscopy, endotracheal intubation, airway suctioning, positive pressure ventilation via facemask (e.g., BiPAP, CPAP), during which air may be forced out around the facemask, and high frequency oscillatory ventilation (HFOV). HCWs who are excluded from duty because of their exposure need not limit their activities outside of the healthcare setting, but should undergo active surveillance for symptoms, including measurement of body temperature twice daily and monitoring for respiratory symptoms for 10 days following exposure.

HCWs who have other unprotected exposures to patients with SARS need not be excluded from duty because of their exposure need not limit their activities outside of the healthcare setting, but should undergo active surveillance for symptoms, including measurement of body temperature twice daily and monitoring for respiratory symptoms for 10 days following exposure.

HCWs who have cared for or otherwise been exposed to SARS patients while adhering to recommended infection control precautions should be instructed to be vigilant for fever and respiratory symptoms, including measurement of body temperature at least twice daily for 10 days following the last exposure to a SARS patient. These HCWs should be contacted by occupational health, infection control or their designee regularly over the 10 day period following exposure to inquire about fever or respiratory symptoms.

#### Management of others (non-household, non-health care workers) with possible exposure to SARS patients

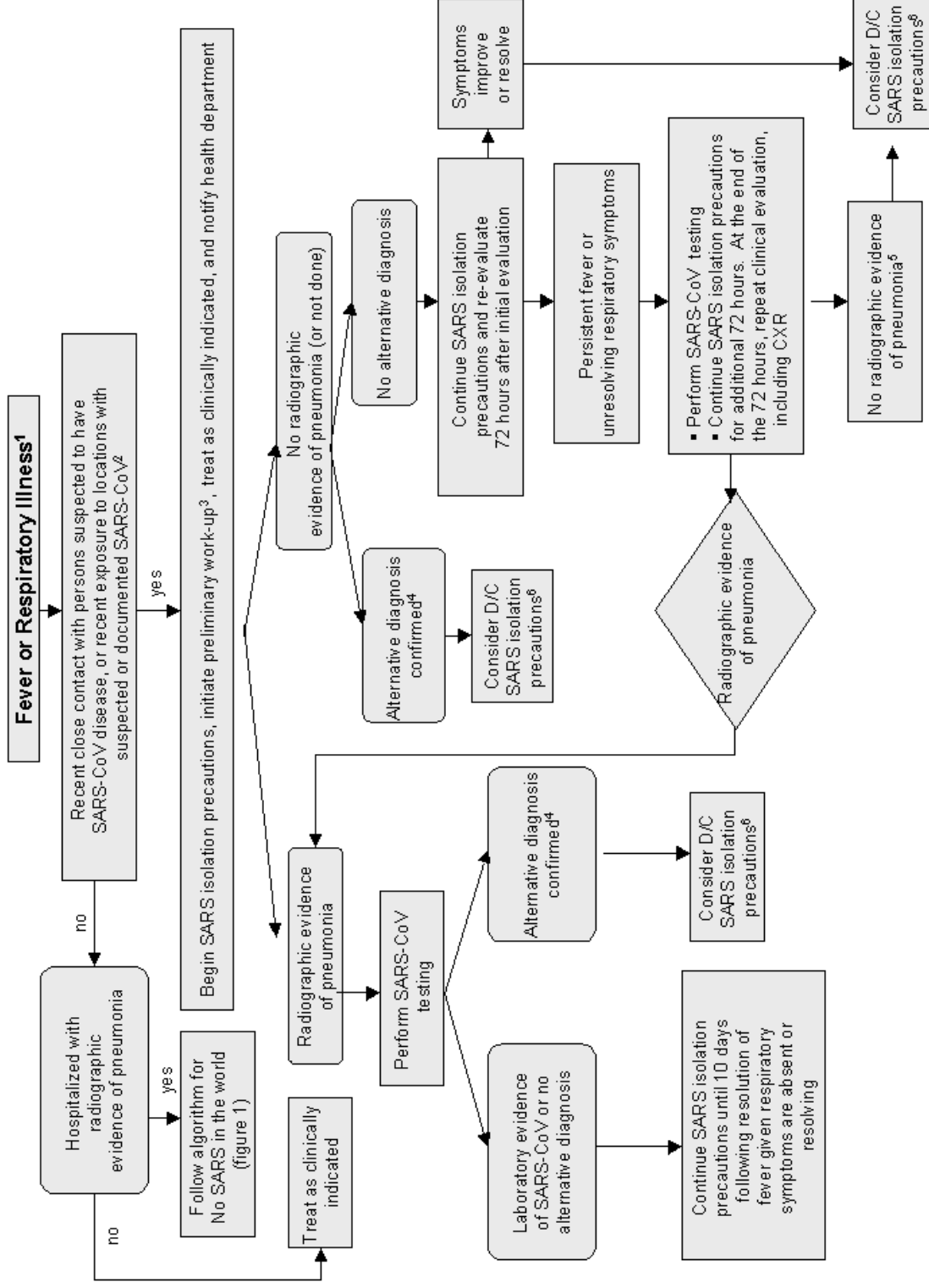
*The following guidance, excerpted from CDC's "Interim Domestic Guidance on Persons Who May Have Been Exposed to Patients with Suspected SARS" (updated August 18, 2003; available at <http://www.cdc.gov/ncidod/sars/exposuremanagement.htm>) is intended to help clinicians manage persons other than HCWs or household contacts who may have been exposed to SARS through international travel to an area with community transmission or as a result of a public health investigation; please note that these guidance are based on epidemiologic criteria including travel history or exposure to known SARS cases, and these criteria will be based on current surveillance data if and when SARS reappears.*

Persons who may have been exposed to SARS should be vigilant for fever (i.e., measure temperature twice daily) and respiratory symptoms over the 10 days following exposure. During this time, in the absence of both fever and respiratory symptoms, persons who may have been exposed to SARS patients need not limit their activities outside the home and should not be excluded from work, school, out-of-home child care, church or other public areas.

Exposed persons should notify their healthcare provider immediately if fever OR respiratory symptoms develop. **In advance of clinical evaluation, healthcare providers should be informed that the individual may have been exposed to SARS so arrangements can be made, as necessary, to prevent transmission to others in the healthcare setting.**

The following algorithm outlines recommendations for the management of persons with fever or respiratory symptoms when SARS-CoV activity is occurring in the world, available at <http://www.cdc.gov/ncidod/sars/clinicalguidance.htm>.

# Algorithm for management of fever or respiratory symptoms when SARS-CoV activity is occurring in the world



## Appendix H

### **N.J.S.A. 26:4-2. Powers of State Department and Local Boards of Health**

In order to prevent the spread of disease, the state department of health, and the local boards of health within their respective jurisdictions and subject to the state sanitary code, shall have power to:

**Defining communicable disease.** a. Declare what diseases are communicable.

**Epidemics.** b. Declare when any communicable disease has become epidemic.

**Reporting diseases.** c. Require the reporting of communicable diseases.

**Isolation and quarantine.** d. Maintain and enforce proper and sufficient quarantine, wherever deemed necessary.

**Removal of infected person.** e. Remove any person infected with a communicable disease to a suitable place, if in its judgment removal is necessary and can be accomplished without any undue risk to the person infected.

**Disinfection.** f. Disinfect any premises when deemed necessary.

**Removal and destruction of property.** g. Remove to a proper, place to be designated by it, all articles within its jurisdiction, which, in its opinion, shall be infected with any matter likely to communicate disease and to destroy such articles, when in its opinion the safety of the public health requires it.

## Appendix I

### STATE OF NEW JERSEY

#### DEPARTMENT OF HEALTH AND SENIOR SERVICES

#### ADMINISTRATIVE ORDER DECLARING ISOLATION AND QUARANTINE OF CERTAIN PERSONS AT \_\_\_\_\_

WHEREAS, pursuant to N.J.S.A. 26:1A-1, et seq. and N.J.S.A. 26:4-1, et seq., the Commissioner of Health and Senior Services ("Commissioner") in his capacity as the head of the Department of Health and Senior Services ("Department") has been afforded broad powers to address a public health emergency; and

WHEREAS, pursuant to N.J.S.A. 26:4-2a, the Department has the power to declare what diseases are communicable; and

WHEREAS, pursuant to N.J.S.A. 26:4-2d and N.J.A.C. 8:571.10, the Department has the power to maintain and enforce proper and sufficient quarantine or isolation, whenever deemed necessary; and

WHEREAS, pursuant to N.J.S.A. 26:4-2e and N.J.A.C. 8:571.10, the Department has the power to remove any person infected with a communicable disease to a suitable place, if in its judgment, removal is necessary and can be accomplished without any undue risk to the person infected; and

WHEREAS, pursuant to N.J.A.C. 8:57-1.3(a) the Department has identified \_\_\_\_\_ [disease] as an immediately reportable communicable disease; and

WHEREAS, on \_\_\_\_\_ [date], the Department commenced an investigation of certain individuals located at \_\_\_\_\_ who were exposed to or infected with a probable case of \_\_\_\_\_ [disease] and

WHEREAS, the situs of the probable case of \_\_\_\_\_ [disease] is \_\_\_\_\_ [location]; and

WHEREAS, \_\_\_\_\_ [description of disease, e.g. highly contagious, transmission through \_\_\_\_\_, with an incubation period of \_\_\_\_\_, etc.]; and

WHEREAS, persons who have been exposed to or infected with \_\_\_\_\_ present a danger to themselves or others in that they are likely to spread \_\_\_\_\_ to unexposed or uninfected individuals in the State,

thereby creating a public health emergency; and

WHEREAS, individuals who have been infected with or exposed to \_\_\_\_\_ must be isolated or quarantined in order to prevent or limit the spread of [ ] to unexposed or uninfected persons in the State and to provide testing, vaccination, treatment; and

NOW THEREFORE IT IS HEREBY ORDERED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2003

1. Persons exhibiting symptoms consistent with infection with \_\_\_\_\_, as determined by the State or local health officials in consultation with the State Epidemiologist, shall be isolated at \_\_\_\_\_ until such time as they no longer present a danger to the public health.

2. Persons who have come into contact with persons exhibiting symptoms consistent with \_\_\_\_\_ shall be quarantined at \_\_\_\_\_ for the incubation period of the disease or until it is otherwise determined that they do not present a danger to the public health.

3. This order shall remain in force until modified or terminated by the Commissioner.

4. Persons subject to isolation or quarantine under this Order may petition the Commissioner for relief from provisions of the Order by making an application to \_\_\_\_\_ [name, address, phone of person responsible for transmitting requests to hearing to OAL or other such designee].

Dated: \_\_\_\_\_

\_\_\_\_\_  
Clifton R. Lacy, M.D.  
Commissioner

## Appendix J

### **Powers of the New Jersey Department of Health & Senior Services and Local Boards of Health**

PETER C. HARVEY  
Attorney General of New Jersey  
Attorney for Petitioner  
New Jersey Department of Health  
And Senior Services  
R.J. Hughes Justice Complex  
P.O. Box 112  
Trenton, New Jersey 08625

By: Deputy Attorney General

)  
)SUPERIOR COURT OF NEW JERSEY  
)LAW DIVISION  
)\_\_\_\_\_COUNTY  
)  
In the Matter of the Isolation )DOCKET NO.:  
)  
Or Quarantine of )  
) Civil Action  
)  
) CERTIFICATION  
)

\_\_\_\_\_ of full age, by way of certification,  
says:

1. I am employed as a \_\_\_\_\_  
by the New Jersey Department of Health and Senior Services (NJDHSS) and make this  
certification in support of the within application seeking to enforce an Administrative Order  
directing the isolation or quarantine of certain individuals pursuant to N.J.S.A. 26:4-2.
2. On \_\_\_\_\_(date) \_\_\_\_\_, certain individuals were exposed to or infected  
with a suspected biological agent believed to be the cause of Severe Acute Respiratory

Syndrome (SARS).

3. The circumstances evidencing exposure or infection are as follows:

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4. NJDHSS Commissioner has identified SARS as a communicable disease which threatens the public health.

5. According to the Centers for Disease Control and Prevention (CDC), the spread of the highly contagious element of SARS make it a public health emergency.

6. SARS is an acute, highly contagious, and sometimes fatal disease caused by a Coronavirus.

7. SARS is said to be spread in a variety of ways, although the most likely mode of transmission is through the air, with the respiratory system as the portal of entry.

8. SARS generally has an incubation period of two (2) to seven (7) days.

9. SARS is characterized by symptoms of a fever over 100.4 degrees Fahrenheit, headache, discomfort, and respiratory symptoms.

10. While it is still a new and recently described disease, treatment for SARS follows that of atypical pneumonia.

11. There are currently no vaccines available for the prevention of SARS.

12. These individuals have been exposed to or infected with the suspected communicable disease SARS Coronavirus and present a danger to themselves or others in that there is a possibility for SARS to spread to unexposed or uninfected individuals in the community, thereby creating an epidemic.

13. These exposed or infected individuals are therefore in need of isolation or quarantine in order to provide testing, treatment, and to prevent or limit the spread of SARS to unexposed or uninfected persons in the community.

14. The Commissioner has issued an Administrative Order authorizing the isolation or quarantine of these individuals who have been exposed to or infected with SARS until such time as they no longer present a danger to the public.

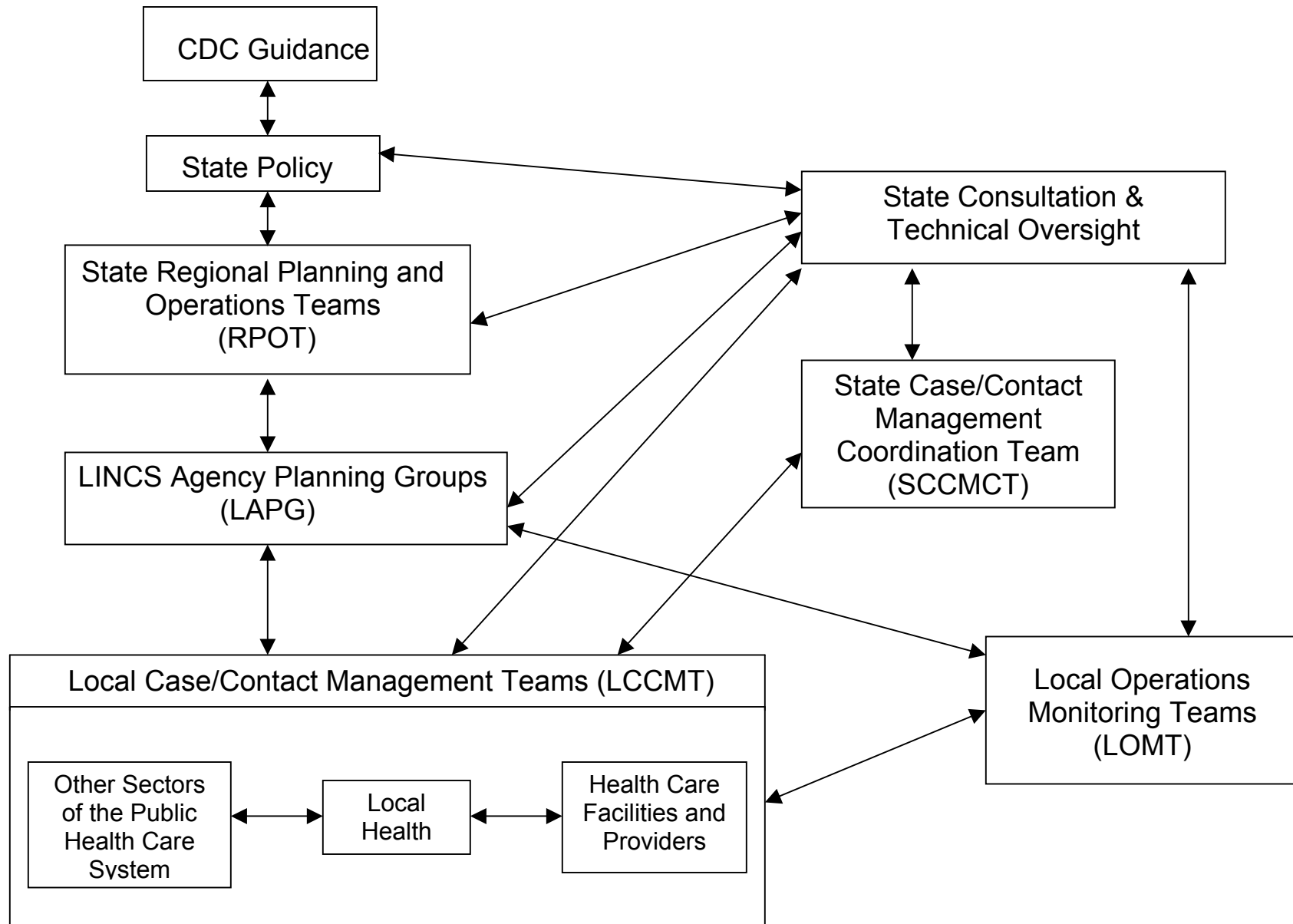
15. I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Dated: \_\_\_\_\_

(Physician, public health or chief medical officer)

## Appendix K

### Isolation and Quarantine Teams



## Appendix L

### SEVERE ACUTE RESPIRATORY SYNDROME (SARS)

#### Draft State of New Jersey Notice of Isolation Agreement (voluntary and non compliant)

I have been informed that I have been diagnosed as having fever or respiratory symptoms within 10 days of possible exposure to Severe Acute Respiratory Syndrome (SARS) and that unless precautions are taken, others may contract this infection from me. Realizing this danger (and in accordance with Sections \_\_\_\_\_ of the State's Health and Safety Code), I, \_\_\_\_\_, hereby agree to the following:

- ☐ I shall remain in home isolation for a minimum of 72 hours beginning on \_\_\_\_/\_\_\_\_/\_\_\_\_ and until my fever or respiratory symptoms are absent or improving. During this time my symptoms will be monitored and assessed.
- ☐ I understand that a \_\_\_\_\_ Public Health Nurse will visit or telephone me at home at least once daily during the period of isolation.
- ☐ I understand that I must remain on isolation until release from isolation is approved by the \_\_\_\_\_ Health Department.

☐ **I shall be isolated at the following location:**

**Street address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **County** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**Telephone:** (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

- ☐ I have been educated about the disease, the reasons for isolation in the home, and the length of time I can expect to be confined to the home.
- ☐ I shall cease all activities and interactions with all other persons living outside the home. I shall not go to school, church, work, out-of-home day care, stores or other public areas. Friends and relatives shall be informed not to visit my home until further notice.
- ☐ I shall have a separate bed and, if possible, a separate bedroom.
- ☐ I shall wear a surgical mask when in the same room with non-infected persons. If I cannot wear a surgical mask, others in the same room will be asked to wear a surgical mask.
- ☐ I shall cover my nose and mouth with a disposable tissue when coughing or sneezing. Disposable tissues will be disposed of in a sealed plastic bag.

- ❑ I, and others living in the same household will wash their hands with soap and water after all contact with respiratory secretions (lung and nasal), blood and all other body fluids (e.g., urine, feces, wound drainage, etc.).
- ❑ All members of my household will wear gloves on both hands when they have contact with my respiratory secretions (lung and nasal), blood and all other body fluids (e.g., urine, feces, wound drainage, etc.). Alcohol-based hand hygiene products may be substituted for handwashing with soap and water, after removing gloves, **IF** the hands are not visibly soiled with respiratory secretions, blood and other body fluids. Gloves will not be reused.
- ❑ Eating and drinking utensils will be washed with hot water and a household dishwashing detergent.
- ❑ Environmental surfaces in the kitchen, bathroom and the infected patient's bedroom will be cleaned and disinfected with a household disinfectant, such as household bleach or Lysol<sup>®</sup>, while wearing gloves, at least daily and when soiled with the respiratory secretions, blood and other body fluids.
- ❑ I shall not share bed linens, towels and personal clothing. Clothes and linens will be washed in cool to warm water with any commercial laundry product.
- ❑ Household waste, including surgical masks and disposable tissues, soiled with respiratory secretions, blood or other body fluids will be placed in sealed plastic bags and disposed of as normal household waste.
- ❑ Household members or other close contacts who develop fever or respiratory symptoms will seek medical evaluation.
- ❑ To prevent transmission of SARS I, or any members of the household who develop SARS symptoms, will call the physician's office, clinic or hospital emergency department to alert healthcare workers of any pending visit.
- ❑ I agree to adhere to the additional recommendations and instructions from the Health Officer listed below:
  1. I shall measure my temperature by thermometer twice daily, in the morning and in the evening.
  2. I shall communicate information regarding temperature, symptoms, and other pertinent information to the Public Health Nurse.
  3. I shall follow-up with my provider if symptoms should worsen.

4. \_\_\_\_\_
5. \_\_\_\_\_

I, or my legal guardian, may contact \_\_\_\_\_, PHN at \_\_\_\_\_ to seek relief from, or seek clarification of, any part of this agreement.

Issued By Order of:

\_\_\_\_\_  
(Health Officer)

\_\_\_\_\_  
Date

**Agreement:**

\_\_\_\_\_, \_\_\_\_\_  
(First) (Last) (Signature of Patient on Isolation)  
(Name of Patient on Isolation)

\_\_\_\_\_  
(Date)

**Witness:**

\_\_\_\_\_  
(Signature of Local Health Department representative)

\_\_\_\_\_  
(Date)

## **Appendix M**

### **Anticipated Data Collection Information**

Updated data collection forms for case and contact management will be available from CDC; however, anticipate data collection to include the following:

- First and last name
- Parent/Guardian name (if appropriate)
- Date of birth
- Sex
- Race and ethnicity
- Occupation
- Work address
- Work telephone number
- Home address
- Home telephone number
- Date of medical evaluation
- Place of medical evaluation
- Pre-existing medical conditions
- Date of fever onset and symptoms
- Initial case-patient presentation
- Date, time and place of case-patient isolation
- Exposure risk factors (e.g., travel to area of known community-transmission of SARS, known exposure to case-patients)
- Initial case-patient classification (confirmed, probable)
- Case-patient status (alive, dead) on date of reporting
- Updated clinical description of SARS at the height of the illness
- Duration of fever and other symptoms
- Complications and sequelae
- Results of laboratory testing for SARS
- Final disposition (discharged to home, deceased, lost to follow-up, etc.)
- Final case-patient classification (if changed, on basis of laboratory testing)

## **Appendix N**

### **NEW JERSEY DEPARTMENT OF HEALTH AND SENIOR SERVICES SEVERE ACUTE RESPIRATORY SYNDROME (SARS) COMMUNICATIONS PLAN**

#### **Goals**

1. Instill and maintain confidence in New Jersey's public health system and its ability to respond to and manage the re-appearance of SARS.
2. Contribute to the maintenance of order, minimization of public panic and fear and facilitation of public protection through the use of accurate and rapid information before, during and after a SARS outbreak.
3. Develop and disseminate timely and accurate information to the general public

#### **Primary Audiences**

1. New Jersey, New York and Philadelphia press
2. General public in New Jersey
3. Health care community, specifically local health departments and hospital officials, and private physicians

#### **Key Messages**

1. New Jersey dealt with SARS in Spring 2003 and is prepared to respond to a reoccurrence of a SARS outbreak.
2. New Jersey's plan will optimize our response to a SARS outbreak and minimize the impact of illness. We will have surveillance and response efforts in place.
3. New Jersey is better prepared to respond to biological threats today than it was at this time last year, and is getting more prepared with every passing day.

## **I. NEWSROOM ACTIVITIES IN THE OFFICE OF COMMUNICATIONS**

### **The Basics**

Unlike Spring 2003, SARS will not be an unknown disease. Like all other states, New Jersey must be prepared for a recurrence of the SARS, both throughout the world and in the United States. The following are recommendations to prepare for a SARS outbreak.

- ❑ Basic Tools:
  - The NJDHSS Office of Communications has updated its ability to communicate with the news media and now posts news releases, advisories and updates on the NJDHSS website as well as electronically transmitting them to the media, local public health agencies and LINC Health Educator/Risk Communicators (HERCs). All HERCs are currently receiving all press releases.
  - There is cable hookup accessible in the NJDHSS Command Center.
  - All Communications Office staff has cell phones and is scheduled to receive Blackberries.
  - Key communications staff has laptops and can work from satellite sites.
- ❑ Website:
  - There is a portal on the NJDHSS site for SARS information. This can be accessed by the public and media through the “Emergency Preparedness” site and the Health Topics A-Z. All SARS-related press releases are also available on the press release site.
  - The site will continue to steer the public to general information areas and health care professionals to another area for highly technical information (such as protocols, training materials, forms, etc.). There are also links to the CDC and World Health Organization (WHO) SARS pages.
  - The website will be updated by information developed by the Office of Communications and will be supported with information developed by MEDTOWER, a collaborative between NJDHSS and UMDNJ.
- ❑ Monitoring of Media Coverage:
  - Media coverage of NJDHSS SARS activities will be closely monitored by the Office of Communications to ensure accuracy. Corrections or clarifications will be aggressively and promptly pursued by the Office of Communications.
  - Partners and other officials, including doctors in private practice, who are quoted by the media making unfounded statements should be contacted by the appropriate communications staff member promptly to correct the inaccuracy.
- ❑ Message Mapping:
  - In collaboration with the State Epidemiologist and the NJDHSS Communicable Disease Service (CDS), the Office of Communications will produce messages for the media before, during and after outbreaks. These messages will be refined as needed. Staff and partners should be regularly briefed.

- These messages will be developed for use by NJDHSS Office of Communications, hospital PIOs, LINCS HERCs and other partners.
- Media Questions and Answers:
  - NJDHSS communications staff will develop a list of potential media questions with answers. These questions will help keep the Department on message before, during and after an outbreak.
- Public Service Announcements (PSAs) – Create PSAs featuring the governor and/or health commissioner promoting key messages and a toll-free information number. Work with local cable and network television and radio stations to try and secure complimentary placement based on the public service nature of the request.

## **II. ACTIVITIES SPECIFIC TO THE PRESS**

### **The Basics**

Using the Department's experiences with SARS, smallpox vaccinations, anthrax and other health emergencies as "lessons learned," the Office of Communications is developing crisis communications material in advance. These materials will include press releases, talking points, fact sheets and frequently asked questions (FAQs). They can be used by NJ hospitals and LINCS agencies to communicate one message with one voice.

Following is a breakdown of topics for press releases with others to be handled on a case-by-case basis.

#### Recommended News Releases (NJDHSS to Produce) with Working Titles

- New Jersey has a Comprehensive SARS Plan
- What Can the Public Do for SARS Prevention
- New Jersey Tests Program (table-top exercise)
- New Jersey Announces Toll-Free SARS Information Line
- First Worldwide Case in 2003/2004 with US/National Implications
- First US Case in 2003/2004 with US/National Implications
- First NJ Case in 2003/2004
- Multiple Cases Release
- Regional Outbreak Release
- Quarantine/Isolation Release
- First Death

## Recommended Fact Sheets for Press and General Public

- ❑ SARS Basics
- ❑ FAQs about SARS
- ❑ Quarantine and Isolation
- ❑ How to Prevent Spread of SARS
- ❑ NJ's SARS Preparedness and Response Plan

All of the above materials will be e-mailed to local health officers, LINCS agencies, and hospital PIOs to be used as stand-alone information materials or to be crafted into geographic-specific materials by LINCS and hospital communications staff.

### **Flow of Information:**

- I. Pre-event:
  - a. Fact sheets and FAQs will be developed by NJDHSS Communications Staff and will be disseminated to local health agencies, LINCS HERCs and hospital PIOs through e-mail and the HERCs intranet (maintained by the Passaic County Department of Health).
  - b. These can be posted before any event occurs.
  - c. Press releases on specific events (first cases, regional outbreaks, deaths etc.) will be developed in advance by NJDHSS Office of Communications. They will be distributed to local health agencies, LINCS' HERCs and hospital PIOs as events occur.
- II. Event:
  - a. Hospital PIOs and LINCS' HERCS will be notified of an event in advance of release of information. They will receive appropriate information as events unfold.
  - b. NJDHSS Office of Communications will also provide LINCS HERCs and Hospital PIOs with talking points on the overall SARS communications plan with overarching media messages.
  - c. However, during an event, NJDHSS Office of Communications will handle all media calls on specific case information.
  - d. Any information that needs to be updated daily or weekly will come from CDC through NJDHSS to LINCS agencies. NJDHSS will provide daily updates through e-mail or HERCS intranet site.
- III. Post-event:
  - a. All post-event updates will be coordinated through the NJDHSS Office of Communications.

### III. ACTIVITIES SPECIFIC TO THE PUBLIC HEALTH CARE COMMUNITY

#### The Basics

While some of the health care community will learn about a SARS outbreak through the news media, this communication tool will not serve to update and educate all the state's physicians, nurses and other health care practitioners. The following activities also need to be conducted.

Recommended Fact Sheets for Health Care Community – These in-depth information and resources already exist on the CDC website at <http://www.cdc.gov/ncidod/sars/clinicians.htm> and are linked to the NJDHSS website.

- [Case Definition](#)
- [Clinical Description](#)
- [Diagnosis/Evaluation](#)
- [Index Case Presentation](#)
- [Infection Control & Exposure Management](#)
- [Reporting](#)
- [Test Results](#)
- [Training & Reference Materials](#)
- [Treatment](#)

#### Hospital Outreach:

- NJDHSS communications staff will contact PIOs for all 85 general acute care hospitals in NJ via e-mail in advance of a case or outbreak and provide fact sheets, media messages and press releases as well as a link to NJDHSS website.

#### LINCS Agencies, HERCS:

- NJDHSS communications staff will email LINCS HERCs all fact sheets, media messages and press releases. All information will also be accessible via the HERCs intranet site.

#### Press Conferences:

- NJDHSS will hold a press conference in early December to announce the unveiling of SARS preparedness and response plan.
- Future press conferences may be held under discretion of NJDHSS principals and the Office of Communications. Topics may include:
  - First NJ case
  - First NJ death
  - County/Regional outbreak